



Rodney Rocha – The Pursuit of Images of Columbia

Interview of 9/22/2010 – Transcript

How would I do it differently?

Always a good question. What I've been talking about in training classes here and there is... one, I discovered emails are not a very good way of communicating an urgent concern. They tend to be, they can be and they were equivocal. And some of my colleagues wrote emails too but they did not state in the email exactly what they wanted to see happen. Some were equivocal. Some were written to NASA headquarters. In my case, I think I wrote mine very clearly. However, I had this... now I can see I had this expectation that really didn't realize itself that people would really do something. I think people can read email and take no action. So, I recommend nowadays doing personal interaction and face-to-face. Now I did that. I did that several times during the mission and got into heated arguments with people. What I would do differently about that is next time, I would not be alone, I would make sure that our group, in our case the Debris Assessment team, of which there was over 30 people, that I take all of them or some of them or a sizable group with me to management. That way it does not appear that there is a single person with this concern, an alarmist or a chicken little or whatever.

I was able to actually put that in practice with STS-400 that's the hypothetical launch on the rescue of the HST maintenance mission. That maintenance mission occurred very successfully, no problems, in May 2009. But before that the Engineering Director at Johnson Space Center put me in charge of the "what if" mission, what if we had to rescue them with another orbiter. We ran into some obstacles there. Some management, flight directors, and mission managers not believing there was any hazardous, very hazardous aspects of this. We learned it was very out of the box. So, when we communicated these, I made sure I took my group with me, the specialists in different fields that we had to look at different technical aspects. We were concerned. We had to come up with new math models and techniques of looking at these and managing the risks. But to communicate these and get an okay to proceed, I took a group. So I'd say take your group, take your experts. Make sure you know what you're talking about. Now, there can be the possibility like in the Columbia mission where the evidence is weak. If you have the evidence, take it, if you have high uncertainty, low technical confidence, communicate that fact and try to be on the side of conservatism.

Things, if they're bad, they can be very bad. And try to avoid the 'prove it's unsafe trap' which can come in a strong form like in the Columbia mission case or in a milder form during the design review or something else. So I'd say get your group of experts with you. Get your consensus, take them with you. That way it's very hard to say not or confront a group or to ignore a group that on the same page.